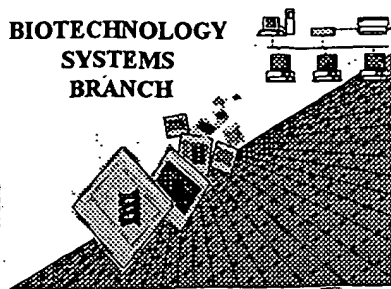


## RAW SEQUENCE LISTING ERROR REPORT

BIOTECHNOLOGY  
SYSTEMS  
BRANCH



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Application Serial Number: 09/744,100A  
Source: Pr/09  
Date Processed by STIC: 1/19/2002

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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

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PCT09

## RAW SEQUENCE LISTING

DATE: 01/19/2002

PATENT APPLICATION: US/09/744,100A

TIME: 11:42:19

Input Set : A:\bb1174 seq listing.txt

Output Set: N:\CRF3\01182002\I744100A.raw

**Does Not Comply  
Corrected Diskette Needed**

3 <110> APPLICANT: Cahoon, Rebecca E.  
 4 Gutteridge, Steven  
 5 Lee, Jian Ming  
 6 Rafalski, Antoni  
 8 <120> TITLE OF INVENTION: Ornithine Biosynthesis Enzymes  
 10 <130> FILE REFERENCE: BB-1174  
 12 <140> CURRENT APPLICATION NUMBER: US/09/744,100A  
 13 <141> CURRENT FILING DATE: 2001-01-18  
 15 <150> PRIOR APPLICATION NUMBER: 60/093,209  
 16 <151> PRIOR FILING DATE: 1998-07-17  
 18 <160> NUMBER OF SEQ ID NOS: 12  
 20 <170> SOFTWARE: Microsoft Office 97

## ERRORED SEQUENCES

551 <210> SEQ ID NO: 12  
 552 <211> LENGTH: 345  
 553 <212> TYPE: PRT  
 554 <213> ORGANISM: Artificial Sequence  
 556 <220> FEATURE:  
 557 <223> OTHER INFORMATION: Description of Artificial Sequence: CONSENSUS  
 559 <220> FEATURE:  
 560 <221> NAME/KEY: UNSURE  
 561 <222> LOCATION: (2)  
 562 <223> OTHER INFORMATION: Xaa=Leu or Met  
 564 <220> FEATURE:  
 565 <221> NAME/KEY: UNSURE  
 566 <222> LOCATION: (3)  
 567 <223> OTHER INFORMATION: Xaa=Leu or Ala  
 569 <220> FEATURE:  
 570 <221> NAME/KEY: UNSURE  
 571 <222> LOCATION: (4)  
 572 <223> OTHER INFORMATION: Xaa=Thr, Ala, or Gly  
 574 <220> FEATURE:  
 575 <221> NAME/KEY: UNSURE  
 576 <222> LOCATION: (5)  
 577 <223> OTHER INFORMATION: Xaa=Pro or none  
 579 <220> FEATURE:  
 580 <221> NAME/KEY: UNSURE  
 581 <222> LOCATION: (6)  
 582 <223> OTHER INFORMATION: Xaa=Trp, His, or none  
 584 <220> FEATURE:

*see pp 3, 5, 7-14*

## RAW SEQUENCE LISTING

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Input Set : A:\bb1174 seq listing.txt

Output Set: N:\CRF3\01182002\I744100A.raw

585 <221> NAME/KEY: UNSURE  
586 <222> LOCATION: (7) (  
587 <223> OTHER INFORMATION: Xaa=Leu or none  
589 <220> FEATURE:  
590 <221> NAME/KEY: UNSURE  
591 <222> LOCATION: (8)..(9) (  
592 <223> OTHER INFORMATION: Xaa=Ser, Ala, or none  
594 <220> FEATURE:  
595 <221> NAME/KEY: UNSURE  
596 <222> LOCATION: (10)  
597 <223> OTHER INFORMATION: Xaa=Ser, Lys, or Pro  
599 <220> FEATURE:  
600 <221> NAME/KEY: UNSURE /  
601 <222> LOCATION: (11)  
602 <223> OTHER INFORMATION: Xaa=Lys, Ser, Thr, or Ala  
604 <220> FEATURE:  
605 <221> NAME/KEY: UNSURE /  
606 <222> LOCATION: (12)  
607 <223> OTHER INFORMATION: Xaa=Leu or Phe  
609 <220> FEATURE:  
610 <221> NAME/KEY: UNSURE  
611 <222> LOCATION: (13) '  
612 <223> OTHER INFORMATION: Xaa=Pro, Thr, or none  
614 <220> FEATURE:  
615 <221> NAME/KEY: UNSURE /  
616 <222> LOCATION: (14)  
617 <223> OTHER INFORMATION: Xaa=Val, Leu, or Asn  
619 <220> FEATURE:  
620 <221> NAME/KEY: UNSURE  
621 <222> LOCATION: (15) '  
622 <223> OTHER INFORMATION: Xaa=Pro or Leu  
624 <220> FEATURE:  
625 <221> NAME/KEY: UNSURE  
626 <222> LOCATION: (16) '  
627 <223> OTHER INFORMATION: Xaa=Ser or Cys  
629 <220> FEATURE:  
630 <221> NAME/KEY: UNSURE  
631 <222> LOCATION: (17)  
632 <223> OTHER INFORMATION: Xaa=Pro, Thr, or Ala  
634 <220> FEATURE:  
635 <221> NAME/KEY: UNSURE  
636 <222> LOCATION: (18) '  
637 <223> OTHER INFORMATION: Xaa=Pro, Arg, or Ser  
639 <220> FEATURE:  
640 <221> NAME/KEY: UNSURE  
641 <222> LOCATION: (19) '  
642 <223> OTHER INFORMATION: Xaa=Pro, Val, Phe, or Leu  
644 <220> FEATURE:  
645 <221> NAME/KEY: UNSURE

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TIME: 11:42:19

Input Set : A:\bb1174 seq listing.txt

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646 <222> LOCATION: (20) /  
647 <223> OTHER INFORMATION: Xaa=Ser, Lys, Thr, or Arg  
649 <220> FEATURE:  
650 <221> NAME/KEY: UNSURE  
651 <222> LOCATION: (21) /  
652 <223> OTHER INFORMATION: Xaa=Gly, Phe, or Asn  
654 <220> FEATURE: /  
655 <221> NAME/KEY: UNSURE  
656 <222> LOCATION: (23) /  
657 <223> OTHER INFORMATION: Xaa=Thr, Ala, or Asn  
659 <220> FEATURE:  
660 <221> NAME/KEY: UNSURE  
661 <222> LOCATION: (24) /  
662 <223> OTHER INFORMATION: Xaa=Leu, Pro, or Lys  
664 <220> FEATURE:  
665 <221> NAME/KEY: UNSURE  
666 <222> LOCATION: (25) /  
667 <223> OTHER INFORMATION: Xaa=Ser, Gly, Pro, or Lys  
669 <220> FEATURE:  
670 <221> NAME/KEY: UNSURE  
671 <222> LOCATION: (26) /  
672 <223> OTHER INFORMATION: Xaa=Ser, Pro, Gln, or Ala  
674 <220> FEATURE:  
675 <221> NAME/KEY: UNSURE  
676 <222> LOCATION: (27) /  
677 <223> OTHER INFORMATION: Xaa=Asn or Ala  
679 <220> FEATURE:  
680 <221> NAME/KEY: UNSURE  
681 <222> LOCATION: (28) /  
682 <223> OTHER INFORMATION: Xaa=His, Gln, or Arg  
684 <220> FEATURE:  
685 <221> NAME/KEY: UNSURE  
686 <222> LOCATION: (29) /  
687 <223> OTHER INFORMATION: Xaa=Ala, Leu, or Val  
689 <220> FEATURE:  
690 <221> NAME/KEY: UNSURE  
691 <222> LOCATION: (30) /  
692 <223> OTHER INFORMATION: Xaa=Ser, Lys, Thr, or Arg  
694 <220> FEATURE:  
695 <221> NAME/KEY: UNSURE  
696 <222> LOCATION: (31) /  
697 <223> OTHER INFORMATION: Xaa=Pro or Thr  
699 <220> FEATURE:  
700 <221> NAME/KEY: UNSURE  
701 <222> LOCATION: (32) /  
702 <223> OTHER INFORMATION: Xaa=Leu, Ile or Ser  
704 <220> FEATURE:  
705 <221> NAME/KEY: UNSURE  
706 <222> LOCATION: (33)

→ what about Xaa at location 22?

## RAW SEQUENCE LISTING

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Input Set : A:\bb1174 seq listing.txt

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707 <223> OTHER INFORMATION: Xaa=Ala or His  
709 <220> FEATURE:  
710 <221> NAME/KEY: UNSURE  
711 <222> LOCATION: (34)  
712 <223> OTHER INFORMATION: Xaa=Ala or Ser  
714 <220> FEATURE:  
715 <221> NAME/KEY: UNSURE  
716 <222> LOCATION: (35)  
717 <223> OTHER INFORMATION: Xaa=Pro, Ser, or Phe  
719 <220> FEATURE:  
720 <221> NAME/KEY: UNSURE  
721 <222> LOCATION: (36)  
722 <223> OTHER INFORMATION: Xaa=Pro, Thr, or Ala  
724 <220> FEATURE:  
725 <221> NAME/KEY: UNSURE  
726 <222> LOCATION: (37)  
727 <223> OTHER INFORMATION: Xaa=Cys, Ala, Ser, or Pro  
729 <220> FEATURE:  
730 <221> NAME/KEY: UNSURE  
731 <222> LOCATION: (38)  
732 <223> OTHER INFORMATION: Xaa=Arg, Pro, Thr, or His  
734 <220> FEATURE:  
735 <221> NAME/KEY: UNSURE  
736 <222> LOCATION: (39)  
737 <223> OTHER INFORMATION: Xaa=Arg, Gly, or none  
739 <220> FEATURE:  
740 <221> NAME/KEY: UNSURE  
741 <222> LOCATION: (40)  
742 <223> OTHER INFORMATION: Xaa=Arg or Leu  
744 <220> FEATURE:  
745 <221> NAME/KEY: UNSURE  
746 <222> LOCATION: (41)  
747 <223> OTHER INFORMATION: Xaa=Ser or Arg  
749 <220> FEATURE:  
750 <221> NAME/KEY: UNSURE  
751 <222> LOCATION: (42)  
752 <223> OTHER INFORMATION: Xaa=Arg, Cys, His, or Gly  
754 <220> FEATURE:  
755 <221> NAME/KEY: UNSURE  
756 <222> LOCATION: (43)  
757 <223> OTHER INFORMATION: Xaa=Arg or Leu  
759 <220> FEATURE:  
760 <221> NAME/KEY: UNSURE  
761 <222> LOCATION: (44)  
762 <223> OTHER INFORMATION: Xaa=Arg or Ala  
764 <220> FEATURE:  
765 <221> NAME/KEY: UNSURE  
766 <222> LOCATION: (45)  
767 <223> OTHER INFORMATION: Xaa=Ile, Leu, or Val

## RAW SEQUENCE LISTING

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PATENT APPLICATION: US/09/744,100A

TIME: 11:42:19

Input Set : A:\bb1174 seq listing.txt

Output Set: N:\CRF3\01182002\I744100A.raw

769 <220> FEATURE:  
770 <221> NAME/KEY: UNSURE  
771 <222> LOCATION: (46)  
772 <223> OTHER INFORMATION: Xaa=Ser, Ala, or none  
774 <220> FEATURE:  
775 <221> NAME/KEY: UNSURE  
776 <222> LOCATION: (47)  
777 <223> OTHER INFORMATION: Xaa=Ala, Val, or none  
779 <220> FEATURE:  
780 <221> NAME/KEY: UNSURE  
781 <222> LOCATION: (48)  
782 <223> OTHER INFORMATION: Xaa=Thr, Val, or none  
784 <220> FEATURE:  
785 <221> NAME/KEY: UNSURE  
786 <222> LOCATION: (49)  
787 <223> OTHER INFORMATION: Xaa=Ala or Ser  
789 <220> FEATURE:  
790 <221> NAME/KEY: UNSURE  
791 <222> LOCATION: (50)  
792 <223> OTHER INFORMATION: Xaa=Thr, Ala, or Asn  
794 <220> FEATURE:  
795 <221> NAME/KEY: UNSURE  
796 <222> LOCATION: (51) (52)  
797 <223> OTHER INFORMATION: Xaa=Ala or Ser  
799 <220> FEATURE:  
800 <221> NAME/KEY: UNSURE  
801 <222> LOCATION: (53)  
802 <223> OTHER INFORMATION: Xaa=Pro, Gln, or Ser  
804 <220> FEATURE:  
805 <221> NAME/KEY: UNSURE  
806 <222> LOCATION: (54)  
807 <223> OTHER INFORMATION: Xaa=Ser, Ala, or Pro  
809 <220> FEATURE:  
810 <221> NAME/KEY: UNSURE  
811 <222> LOCATION: (55)  
812 <223> OTHER INFORMATION: Xaa=Pro, Ala, or Leu  
814 <220> FEATURE:  
815 <221> NAME/KEY: UNSURE  
816 <222> LOCATION: (56)  
817 <223> OTHER INFORMATION: Xaa=Ser, Leu, or Ala  
819 <220> FEATURE:  
820 <221> NAME/KEY: UNSURE  
821 <222> LOCATION: (57)  
822 <223> OTHER INFORMATION: Xaa=Ser, Ala, or Pro  
824 <220> FEATURE:  
825 <221> NAME/KEY: UNSURE  
826 <222> LOCATION: (59)  
827 <223> OTHER INFORMATION: Xaa=Ala, Glu, or Gln  
829 <220> FEATURE:

→ what about Xaa at location 58?

"Ala" is at location 59

## RAW SEQUENCE LISTING

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Input Set : A:\bb1174 seq listing.txt

Output Set: N:\CRF3\01182002\I744100A.raw

830 <221> NAME/KEY: UNSURE  
831 <222> LOCATION: (60)  
832 <223> OTHER INFORMATION: Xaa=Ala or Thr  
834 <220> FEATURE:  
835 <221> NAME/KEY: UNSURE  
836 <222> LOCATION: (62)  
837 <223> OTHER INFORMATION: Xaa=Thr, Ser, or none  
839 <220> FEATURE:  
840 <221> NAME/KEY: UNSURE  
841 <222> LOCATION: (63)  
842 <223> OTHER INFORMATION: Xaa=Glu or Ala  
844 <220> FEATURE:  
845 <221> NAME/KEY: UNSURE  
846 <222> LOCATION: (64)  
847 <223> OTHER INFORMATION: Xaa=Ala, Ser, or Gly  
849 <220> FEATURE:  
850 <221> NAME/KEY: UNSURE  
851 <222> LOCATION: (65)  
852 <223> OTHER INFORMATION: Xaa=Leu or Gln  
854 <220> FEATURE:  
855 <221> NAME/KEY: UNSURE  
856 <222> LOCATION: (66)  
857 <223> OTHER INFORMATION: Xaa=Ser, Tyr or Asn  
859 <220> FEATURE:  
860 <221> NAME/KEY: UNSURE  
861 <222> LOCATION: (74)  
862 <223> OTHER INFORMATION: Xaa=Ala or Ser  
864 <220> FEATURE:  
865 <221> NAME/KEY: UNSURE  
866 <222> LOCATION: (80)  
867 <223> OTHER INFORMATION: Xaa=Arg or Lys  
869 <220> FEATURE:  
870 <221> NAME/KEY: UNSURE  
871 <222> LOCATION: (82)  
872 <223> OTHER INFORMATION: Xaa=Arg or Lys  
874 <220> FEATURE:  
875 <221> NAME/KEY: UNSURE  
876 <222> LOCATION: (86)  
877 <223> OTHER INFORMATION: Xaa=Val or Ile  
879 <220> FEATURE:  
880 <221> NAME/KEY: UNSURE  
881 <222> LOCATION: (106)  
882 <223> OTHER INFORMATION: Xaa=Arg or Asn  
884 <220> FEATURE:  
885 <221> NAME/KEY: UNSURE  
886 <222> LOCATION: (117)  
887 <223> OTHER INFORMATION: Xaa=Arg or His  
W--> 888 <220> FEATURE:  
889 <221> NAME/KEY: UNSURE

## RAW SEQUENCE LISTING

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Input Set : A:\bb1174 seq listing.txt

Output Set: N:\CRF3\01182002\I744100A.raw

890 <222> LOCATION: (133) ✓  
 891 <223> OTHER INFORMATION: Xaa=Leu, Gly or Gln  
 W--> 892 <220> FEATURE:  
 893 <221> NAME/KEY: UNSURE  
 894 <222> LOCATION: (135) ✓  
 895 <223> OTHER INFORMATION: Xaa=Val or Lys  
 W--> 897 <220> FEATURE:  
 898 <221> NAME/KEY: UNSURE  
 899 <222> LOCATION: (136) ✓  
 900 <223> OTHER INFORMATION: Xaa=Gly or Asn  
 W--> 902 <220> FEATURE:  
 903 <221> NAME/KEY: UNSURE ✓  
 904 <222> LOCATION: (137)  
 905 <223> OTHER INFORMATION: Xaa=Val or Ile  
 W--> 907 <220> FEATURE:  
 908 <221> NAME/KEY: UNSURE  
 909 <222> LOCATION: (138) ✓  
 910 <223> OTHER INFORMATION: Xaa=Glu or Pro  
 W--> 912 <220> FEATURE:  
 913 <221> NAME/KEY: UNSURE  
 914 <222> LOCATION: (139)  
 915 <223> OTHER INFORMATION: Xaa=Gln or Val  
 W--> 917 <220> FEATURE: → what about Xaa at location 140?  
 918 <221> NAME/KEY: UNSURE  
 919 <222> LOCATION: (142)  
 920 <223> OTHER INFORMATION: Xaa=Asp or Asn "Arg" is at location 142  
 W--> 922 <220> FEATURE: → what about Xaa at location 143?  
 923 <221> NAME/KEY: UNSURE  
 924 <222> LOCATION: (150)  
 925 <223> OTHER INFORMATION: Xaa=Leu or Asp "Ala" is at location 150.  
 W--> 927 <220> FEATURE:  
 928 <221> NAME/KEY: UNSURE  
 929 <222> LOCATION: (151) ✓  
 930 <223> OTHER INFORMATION: Xaa=Thr or Asn → what about Xaa at location 152?  
 W--> 932 <220> FEATURE:  
 933 <221> NAME/KEY: UNSURE  
 934 <222> LOCATION: (154)  
 935 <223> OTHER INFORMATION: Xaa=Val or Ile "Glu" is at location 154  
 W--> 937 <220> FEATURE: → what about Xaa at location 155?  
 938 <221> NAME/KEY: UNSURE  
 939 <222> LOCATION: (156)  
 940 <223> OTHER INFORMATION: Xaa=Glu or Ser "Val" is at location 156  
 W--> 942 <220> FEATURE: → what about Xaa at location 157?  
 943 <221> NAME/KEY: UNSURE  
 944 <222> LOCATION: (161) "Val" is at location 161  
 945 <223> OTHER INFORMATION: Xaa=Gly or Arg  
 W--> 947 <220> FEATURE: → what about Xaa at location 162?  
 948 <221> NAME/KEY: UNSURE  
 949 <222> LOCATION: (166)

see p 8



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Input Set : A:\bb1174 seq listing.txt

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950 <223> OTHER INFORMATION: Xaa=Asn, Glu, Thr or Gln *Lys is at location 166*  
 W--> 952 <220> FEATURE: *what about Xaa at location 167?*  
 953 <221> NAME/KEY: UNSURE *Ile is at location 172*  
 954 <222> LOCATION: (172) *what about Xaa at location 169?*  
 955 <223> OTHER INFORMATION: Xaa=Asn, Lys or Arg  
 W--> 957 <220> FEATURE:  
 958 <221> NAME/KEY: UNSURE  
 959 <222> LOCATION: (173)  
 960 <223> OTHER INFORMATION: Xaa=Ile, Leu, Lys or Pro  
 W--> 962 <220> FEATURE:  
 963 <221> NAME/KEY: UNSURE  
 964 <222> LOCATION: (174)  
 965 <223> OTHER INFORMATION: Xaa=Ala or Pro *what about Xaa at location 175?*  
 W--> 967 <220> FEATURE:  
 968 <221> NAME/KEY: UNSURE  
 969 <222> LOCATION: (177)  
 970 <223> OTHER INFORMATION: Xaa=Thr or Ser *what about Xaa at location 178?*  
 W--> 972 <220> FEATURE:  
 973 <221> NAME/KEY: UNSURE  
 974 <222> LOCATION: (179) *Ala is at location 179*  
 975 <223> OTHER INFORMATION: Xaa=Val or Ile  
 W--> 977 <220> FEATURE:  
 978 <221> NAME/KEY: UNSURE  
 979 <222> LOCATION: (180)  
 980 <223> OTHER INFORMATION: Xaa=Gly or Ser *what about Xaa at location 181?*  
 W--> 982 <220> FEATURE:  
 983 <221> NAME/KEY: UNSURE  
 984 <222> LOCATION: (183)  
 985 <223> OTHER INFORMATION: Xaa=Gly, Trp or Arg  
 W--> 987 <220> FEATURE:  
 988 <221> NAME/KEY: UNSURE  
 989 <222> LOCATION: (184)  
 990 <223> OTHER INFORMATION: Xaa=Lys or Met  
 W--> 992 <220> FEATURE:  
 993 <221> NAME/KEY: UNSURE  
 994 <222> LOCATION: (185)  
 995 <223> OTHER INFORMATION: Xaa=Asp or Glu  
 W--> 997 <220> FEATURE:  
 998 <221> NAME/KEY: UNSURE  
 999 <222> LOCATION: (186)  
 1000 <223> OTHER INFORMATION: Xaa=Gly or Ala *what about Xaa at location 187?*  
 W--> 1002 <220> FEATURE:  
 1003 <221> NAME/KEY: UNSURE  
 1004 <222> LOCATION: (189)  
 1005 <223> OTHER INFORMATION: Xaa=Ile or Leu *Leu is at location 189*  
 W--> 1007 <220> FEATURE:  
 1008 <221> NAME/KEY: UNSURE  
 1009 <222> LOCATION: (190)  
 1010 <223> OTHER INFORMATION: Xaa=Thr or Asn

## RAW SEQUENCE LISTING

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W--> 1012 <220> FEATURE:  
 1013 <221> NAME/KEY: UNSURE  
 1014 <222> LOCATION: (191)  
 1015 <223> OTHER INFORMATION: Xaa=Glu or Ala } what about Xaa at location 192?

W--> 1017 <220> FEATURE:  
 1018 <221> NAME/KEY: UNSURE  
 1019 <222> LOCATION: (194)  
 1020 <223> OTHER INFORMATION: Xaa=Ala or Ser "Pro" is at location 194

W--> 1022 <220> FEATURE:  
 1023 <221> NAME/KEY: UNSURE  
 1024 <222> LOCATION: (196)  
 1025 <223> OTHER INFORMATION: Xaa=Asn, Lys or Asp "Pro" is at location 196 } what about Xaa at location 195?

W--> 1027 <220> FEATURE:  
 1028 <221> NAME/KEY: UNSURE  
 1029 <222> LOCATION: (197)  
 1030 <223> OTHER INFORMATION: Xaa=Glu or Ala

W--> 1032 <220> FEATURE:  
 1033 <221> NAME/KEY: UNSURE  
 1034 <222> LOCATION: (198)  
 1035 <223> OTHER INFORMATION: Xaa=Lys or Ala

W--> 1037 <220> FEATURE:  
 1038 <221> NAME/KEY: UNSURE  
 1039 <222> LOCATION: (199)  
 1040 <223> OTHER INFORMATION: Xaa=Ala, Gly or Asp } what about Xaa at location 200?

W--> 1042 <220> FEATURE:  
 1043 <221> NAME/KEY: UNSURE  
 1044 <222> LOCATION: (201)  
 1045 <223> OTHER INFORMATION: Xaa=Gly or Arg "Leu" is at location 201

W--> 1047 <220> FEATURE:  
 1048 <221> NAME/KEY: UNSURE  
 1049 <222> LOCATION: (202)  
 1050 <223> OTHER INFORMATION: Xaa=Phe or Tyr } what about Xaa at location 203?

W--> 1052 <220> FEATURE:  
 1053 <221> NAME/KEY: UNSURE  
 1054 <222> LOCATION: (205)  
 1055 <223> OTHER INFORMATION: Xaa=Glu or Gly "Gly" is at location 205 } what about Xaa at location 206?

W--> 1057 <220> FEATURE:  
 1058 <221> NAME/KEY: UNSURE  
 1059 <222> LOCATION: (207)  
 1060 <223> OTHER INFORMATION: Xaa=Ser, Trp, Ala or Thr "Val" is at location 207 } what about Xaa at location 208?

W--> 1062 <220> FEATURE:  
 1063 <221> NAME/KEY: UNSURE  
 1064 <222> LOCATION: (209)  
 1065 <223> OTHER INFORMATION: Xaa=Val or Lys "Arg" is at location 209

W--> 1067 <220> FEATURE:  
 1068 <221> NAME/KEY: UNSURE  
 1069 <222> LOCATION: (210)  
 1070 <223> OTHER INFORMATION: Xaa=Asp or Asn

W--> 1072 <220> FEATURE:

## RAW SEQUENCE LISTING

DATE: 01/19/2002

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Input Set : A:\bb1174 seq listing.txt

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1073 <221> NAME/KEY: UNSURE  
 1074 <222> LOCATION: (211)  
 1075 <223> OTHER INFORMATION: Xaa=Ala or Pro  
 W--> 1077 <220> FEATURE:  
 1078 <221> NAME/KEY: UNSURE  
 1079 <222> LOCATION: (212)  
 1080 <223> OTHER INFORMATION: Xaa=Thr, Ala or Ser  
 W--> 1082 <220> FEATURE: *what about Xaa at location 213?*  
 1083 <221> NAME/KEY: UNSURE  
 1084 <222> LOCATION: (215)  
 1085 <223> OTHER INFORMATION: Xaa=Arg or His *"Leu" is at location 215*  
 W--> 1087 <220> FEATURE:  
 1088 <221> NAME/KEY: UNSURE  
 1089 <222> LOCATION: (216)  
 1090 <223> OTHER INFORMATION: Xaa=Pro or Ser  
 W--> 1092 <220> FEATURE:  
 1093 <221> NAME/KEY: UNSURE  
 1094 <222> LOCATION: (217)  
 1095 <223> OTHER INFORMATION: Xaa=Ile or Leu *what about Xaa at location 218?*  
 W--> 1097 <220> FEATURE:  
 1098 <221> NAME/KEY: UNSURE  
 1099 <222> LOCATION: (219)  
 1100 <223> OTHER INFORMATION: Xaa=Ala or Asp *"Ile" is at location 219*  
 W--> 1102 <220> FEATURE:  
 1103 <221> NAME/KEY: UNSURE  
 1104 <222> LOCATION: (220)  
 1105 <223> OTHER INFORMATION: Xaa=Thr, Ala or Ser  
 W--> 1107 <220> FEATURE:  
 1108 <221> NAME/KEY: UNSURE  
 1109 <222> LOCATION: (221)  
 1110 <223> OTHER INFORMATION: Xaa=Gly or Ser *what about Xaa at location 222?*  
 W--> 1112 <220> FEATURE:  
 1113 <221> NAME/KEY: UNSURE  
 1114 <222> LOCATION: (226)  
 1115 <223> OTHER INFORMATION: Xaa=Val or Ile *"Val" is at location 226*  
 W--> 1117 <220> FEATURE:  
 1118 <221> NAME/KEY: UNSURE  
 1119 <222> LOCATION: (228)  
 1120 <223> OTHER INFORMATION: Xaa=Thr or Ser *what about Xaa at location 229?*  
 W--> 1122 <220> FEATURE:  
 1123 <221> NAME/KEY: UNSURE  
 1124 <222> LOCATION: (230)  
 1125 <223> OTHER INFORMATION: Xaa=Gly or Ala *"Val" is at location 230*  
 W--> 1127 <220> FEATURE: *what about Xaa at location 231?*  
 1128 <221> NAME/KEY: UNSURE  
 1129 <222> LOCATION: (234)  
 1130 <223> OTHER INFORMATION: Xaa=Thr or Ser *"Glu" is at location 234*  
 W--> 1132 <220> FEATURE: *what about Xaa at location 235?*  
 1133 <221> NAME/KEY: UNSURE

## RAW SEQUENCE LISTING

DATE: 01/19/2002

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TIME: 11:42:19

Input Set : A:\bb1174 seq listing.txt

Output Set: N:\CRF3\01182002\I744100A.raw

1134 <222> LOCATION: (237)

1135 <223> OTHER INFORMATION: Xaa=Ala or Pro *Gln is at location 237*

W--> 1137 <220> FEATURE: *what about*

1138 <221> NAME/KEY: UNSURE *Xaa at location*

1139 <222> LOCATION: (245)

1140 <223> OTHER INFORMATION: Xaa=Ala or Val *Thr is at location 245*

W--> 1142 <220> FEATURE: *what about*

1143 <221> NAME/KEY: UNSURE *Xaa at location 238?*

1144 <222> LOCATION: (249)

1145 <223> OTHER INFORMATION: Xaa=Ile or Leu *Glu is at location 246?*

W--> 1147 <220> FEATURE: *what about Xaa*

1148 <221> NAME/KEY: UNSURE *at location 250?*

1149 <222> LOCATION: (252)

1150 <223> OTHER INFORMATION: Xaa=Ala or Ser *Ala is at location 252*

W--> 1152 <220> FEATURE:

1153 <221> NAME/KEY: UNSURE

1154 <222> LOCATION: (253)

1155 <223> OTHER INFORMATION: Xaa=Ile, Leu or Val *what about Xaa at*

W--> 1157 <220> FEATURE: *location 254?*

1158 <221> NAME/KEY: UNSURE

1159 <222> LOCATION: (256)

1160 <223> OTHER INFORMATION: Xaa=Ala or Ser *Ala is at location 256*

W--> 1162 <220> FEATURE:

1163 <221> NAME/KEY: UNSURE

1164 <222> LOCATION: (259)

1165 <223> OTHER INFORMATION: Xaa=Ile or Leu *Leu is at location 259*

W--> 1167 <220> FEATURE: *what about Xaa at*

1168 <221> NAME/KEY: UNSURE *location 260?*

1169 <222> LOCATION: (261)

1170 <223> OTHER INFORMATION: Xaa=Ile or Leu *Leu is at location 261*

W--> 1172 <220> FEATURE: *what about Xaa at location 262?*

1173 <221> NAME/KEY: UNSURE *what about Xaa at location 266?*

1174 <222> LOCATION: (269)

1175 <223> OTHER INFORMATION: Xaa=Glu or Ala *Leu is at location 269*

W--> 1177 <220> FEATURE: *what about Xaa*

1178 <221> NAME/KEY: UNSURE *at location 270?*

1179 <222> LOCATION: (272)

1180 <223> OTHER INFORMATION: Xaa=Asp or Asn *Arg is at location 272*

W--> 1182 <220> FEATURE: *what about*

1183 <221> NAME/KEY: UNSURE *Xaa at location*

1184 <222> LOCATION: (275)

1185 <223> OTHER INFORMATION: Xaa=Gly or Asp *Pro is at location 275*

W--> 1187 <220> FEATURE: *what about Xaa at location 276?*

1188 <221> NAME/KEY: UNSURE *273?*

1189 <222> LOCATION: (176)

1190 <223> OTHER INFORMATION: Xaa=Thr, Ala or Gly *Gly is at location 176*

W--> 1192 <220> FEATURE:

1193 <221> NAME/KEY: UNSURE

1194 <222> LOCATION: (182)

## RAW SEQUENCE LISTING

DATE: 01/19/2002

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TIME: 11:42:19

Input Set : A:\bb1174 seq listing.txt

Output Set: N:\CRF3\01182002\I744100A.raw

1195 <223> OTHER INFORMATION: Xaa=Ser or Cys "Leu" is at location 182

W--> 1197 <220> FEATURE:

1198 <221> NAME/KEY: UNSURE

1199 <222> LOCATION: (227)

1200 <223> OTHER INFORMATION: Xaa=Ala or Thr

W--> 1202 <220> FEATURE:

1203 <221> NAME/KEY: UNSURE

1204 <222> LOCATION: (280)

1205 <223> OTHER INFORMATION: Xaa=Val, Glu or Lys "Lys" is at location 280

W--> 1207 <220> FEATURE:

1208 <221> NAME/KEY: UNSURE

1209 <222> LOCATION: (281)

1210 <223> OTHER INFORMATION: Xaa=Val or Ile

W--> 1212 <220> FEATURE: } what about Xaa at location 282?

1213 <221> NAME/KEY: UNSURE

1214 <222> LOCATION: (284)

1215 <223> OTHER INFORMATION: Xaa=Lys or Ala "Ile" is at location 284

W--> 1217 <220> FEATURE: } what about Xaa at location 285?

1218 <221> NAME/KEY: UNSURE

1219 <222> LOCATION: (288)

1220 <223> OTHER INFORMATION: Xaa=Lys, Gln or Arg "Arg" is at location 288

W--> 1222 <220> FEATURE: } what about Xaa at location 289?

1223 <221> NAME/KEY: UNSURE

1224 <222> LOCATION: (290)

1225 <223> OTHER INFORMATION: Xaa=Val or Met "Met" is at location 290

W--> 1227 <220> FEATURE:

1228 <221> NAME/KEY: UNSURE

1229 <222> LOCATION: (291)

1230 <223> OTHER INFORMATION: Xaa=Glu or Ala

W--> 1232 <220> FEATURE:

1233 <221> NAME/KEY: UNSURE

1234 <222> LOCATION: (292)

1235 <223> OTHER INFORMATION: Xaa=Asp or Glu } what about Xaa at location 293?

W--> 1237 <220> FEATURE:

1238 <221> NAME/KEY: UNSURE

1239 <222> LOCATION: (294)

1240 <223> OTHER INFORMATION: Xaa=Lys or Gln "Gly" is at location 294

W--> 1242 <220> FEATURE: } what about Xaa at location 295?

1243 <221> NAME/KEY: UNSURE

1244 <222> LOCATION: (296)

1245 <223> OTHER INFORMATION: Xaa=Gly or Ala "Val" is at location 296

W--> 1247 <220> FEATURE: } what about Xaa at location 297?

1248 <221> NAME/KEY: UNSURE

1249 <222> LOCATION: (304)

1250 <223> OTHER INFORMATION: Xaa=Glu, Asn or Gly "Val" is at location 304

W--> 1252 <220> FEATURE: } what about Xaa at location 305?

1253 <221> NAME/KEY: UNSURE

1254 <222> LOCATION: (308)

1255 <223> OTHER INFORMATION: Xaa=Arg or His "Val" is at location 308

## RAW SEQUENCE LISTING

DATE: 01/19/2002

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TIME: 11:42:19

Input Set : A:\bb1174 seq listing.txt

Output Set: N:\CRF3\01182002\I744100A.raw

W--> 1257 <220> FEATURE:  
 1258 <221> NAME/KEY: UNSURE  
 1259 <222> LOCATION: (309)  
 1260 <223> OTHER INFORMATION: Xaa=Ala or Ser

W--> 1262 <220> FEATURE:  
 1263 <221> NAME/KEY: UNSURE  
 1264 <222> LOCATION: (405)  
 1265 <223> OTHER INFORMATION: Xaa=His or Ile

W--> 1267 <220> FEATURE:  
 1268 <221> NAME/KEY: UNSURE  
 1269 <222> LOCATION: (428)  
 1270 <223> OTHER INFORMATION: Xaa=Ala or Thr  
 1273 <400> SEQUENCE: 12

W--> 1274 Met Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 1275 1 / 5 10 15  
 W--> 1277 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 1278 20 25 30  
 W--> 1280 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 1281 35 40 45  
 W--> 1283 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 1284 50 55 60  
 W--> 1286 Xaa Xaa Arg Val Asp Val Leu Ser Glu Xaa Leu Pro Phe Ile Gln Xaa  
 1287 65 70 75 80  
 W--> 1289 Phe Xaa Gly Lys Thr Xaa Val Val Lys Tyr Gly Gly Ala Ala Met Lys  
 1290 85 90 95  
 W--> 1292 Ser Pro Glu Leu Gln Ala Ser Val Ile Xaa Asp Leu Val Leu Leu Ser  
 1293 100 105 110  
 W--> 1295 Cys Val Gly Leu Xaa Pro Val Leu Val His Gly Gly Gly Pro Glu Ile  
 1296 115 120 125  
 W--> 1298 Asn Ser Trp Leu Xaa Arg Xaa Xaa Xaa Xaa Xaa Xaa Phe Arg Xaa Gly  
 1299 130 135 140  
 W--> 1301 Leu Arg Val Thr Asp Ala Xaa Xaa Met Glu Xaa Val Xaa Met Val Leu  
 1302 145 150 155 160  
 W--> 1304 Val Xaa Lys Val Asn Lys Xaa Leu Xaa Ser Leu Ile Xaa Xaa Xaa Gly  
 1305 165 170 175  
 W--> 1307 Xaa Xaa Ala Xaa Xaa Leu Xaa Xaa Xaa Xaa Arg Leu Xaa Xaa Xaa  
 1308 180 185 190  
 W--> 1310 Arg Pro Xaa Pro Xaa Xaa Xaa Xaa Leu Xaa Xaa Val Gly Xaa Val Xaa  
 1311 195 200 205  
 W--> 1313 Arg Xaa Xaa Xaa Xaa Val Leu Xaa Xaa Xaa Ile Xaa Xaa Xaa His Ile  
 1314 210 215 220  
 W--> 1316 Pro Val Xaa Xaa Xaa Val Xaa Ala Asp Glu Xaa Gly Gln Xaa Tyr Asn  
 1317 225 230 235 240  
 W--> 1319 Ile Asn Ala Asp Thr Xaa Ala Gly Glu Xaa Ala Ala Xaa Xaa Gly Ala  
 1320 245 250 255  
 W--> 1322 Glu Lys Leu Xaa Leu Xaa Thr Asp Val Xaa Gly Ile Leu Xaa Asp Arg  
 1323 260 265 270  
 W--> 1325 Xaa Asp Pro Xaa Ser Leu Val Lys Xaa Xaa Asp Ile Xaa Gly Val Arg  
 1326 275 280 285

what about Xaa at location 310?  
 what about Xaa at location 311?  
 what about Xaa at location 339?

only 345 amino acids in  
 seq. 12

## RAW SEQUENCE LISTING

DATE: 01/19/2002

PATENT APPLICATION: US/09/744,100A

TIME: 11:42:19

Input Set : A:\bb1174 seq listing.txt

Output Set: N:\CRF3\01182002\I744100A.raw

W--> 1328 Xaa Met Xaa Xaa Xaa Gly Xaa Val Xaa Gly Gly Met Ile Pro Lys Val  
 1329 290 295 300  
 W--> 1331 Xaa Cys Cys Val Xaa Xaa Leu Ala Gln Gly Val Xaa Thr Ala Ser Ile  
 1332 305 310 315 320  
 1334 Leu Asp Gly Arg Val Pro His Ser Leu Leu Leu Glu Ile Leu Thr Asp  
 1335 325 330 335  
 W--> 1337 Glu Gly Xaa Gly Thr Met Ile Thr Gly  
 1338 340 345  
 E--> 1341 3

*delete**F94*

Use of n and/or Xaa has been detected in the Sequence Listing.  
 Review the Sequence Listing to insure a corresponding  
 explanation is presented in the <220> to <223> fields of  
 each sequence using n or Xaa.

## VERIFICATION SUMMARY

DATE: 01/19/2002

PATENT APPLICATION: US/09/744,100A

TIME: 11:42:20

Input Set : A:\bb1174 seq listing.txt

Output Set: N:\CRF3\01182002\I744100A.raw

L:143 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3  
L:201 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4  
L:350 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:351 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7  
L:404 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:407 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:888 M:283 W: Missing Blank Line separator, <220> field identifier  
L:892 M:283 W: Missing Blank Line separator, <220> field identifier  
L:1274 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1277 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1280 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1283 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1286 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1289 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1292 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1295 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1298 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1301 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1304 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1307 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1310 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1313 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1316 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1319 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1322 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1325 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1328 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1331 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1337 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:1341 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:12